UNITED STATES PATENT AND TRADEMARK OFFICE

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			EXAMINER
22852	7590	03/26/2004	FLEURANTIN, JEAN B

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Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 January 2004*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,4-6,8,18-28 and 32-40* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,4-6,8,18-28 and 32-40* is/are rejected.

7)☒ Claim(s) *9-17 and 29-31* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Response to Amendment

1.   Applicant's Appeal Brief and request for reconsideration of the finality of the rejection of

the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

The Office regrets any inconvenience due to Applicant(s).

2.   Claims 1,2, 4-6 and 8-40 remain pending for examination.

Response to Arguments

3.   In response to Applicant arguments, dated 6/16/03 with respect to claims 1-40, pages 4

and 5, that Apte does not teach the limitations as recited in claim 1. It is respectively submitted

that Apte discloses the claimed limitations as follow: a computer readable medium, operative to

serve as a database interface, having instructions which when executed by a computer system

(see col. 3, lines 51-55), comprise the following steps of receiving a Structure Query Logic

(SQL) call at a computer system (thus, client object 400 may initiate calls to server object 402 to

access database 404 based on various business rules or business logic implemented within the

server object 402, database 404 may be located within the server or be a remote database; which

is readable as receiving a Structure Query Logic (SQL) call at a computer system; see col. 6,

lines 31-35). Apte does not explicitly disclose the steps of mapping the SQL call to a general

computer language programming call of a computer application; and executing the general

computer language programming call to invoke functions of the computer application that

correspond to functions specified by the SQL call. However, Apte discloses a technique of

mapping references to a common object request broker architecture server containing an

Enterprise JavaBean to back-end data store using primitive data types, (see cols. 16-17, lines 66-10), and client object 400 may initiate calls to server object 402 to access database 404 based on various business rules or business logic implemented within server object 402 database 404 may be located within the server or be a remote database, server object 402 may also provide access to current enterprise applications 410 and access to legacy applications 408, (see col. 6, lines 31-37). Further, in column 8, lines 11-16, Apte discloses the client can transparently invoke a method on a server object which can be on the same machine or across a network, the object request broker intercepts the call and is responsible for finding an object that can implement the request, pass it to the parameters, and invoke its method and return the results. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the teachings of Apte with mapping the database call to a general computer language programming call of a computer application; and executing the general computer language programming call to invoke functions of the computer application that correspond to functions specified by the database call. Such modification would allow the teaching of Apte to improve the accuracy of the database access bridge system and process, and to provide a uniform application development model for tool creation use, and interoperability between various software applications, (see col. 1, lines 40-41 and 56-57).

Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Applicant stated that Apte does not teach or suggest "said system operative to execute said general computer programming language call and operative to generate a second database

programming language." It is respectively submitted that Apte does not explicitly discloses said

system operative to execute said general computer programming language call and operative to

generate a second database programming language. However, Apte discloses a server object

contains the actual business logic that is implemented using application programming interfaces

that utilize the java defined java database connectivity structured query language database access

interface which provides uniform access to a wide range of relational databases, these databases

may be found in database, server object contains methods used to provide needed functions

invoked from client object, (see col. 6, lines 46-53). It would have been obvious to a person of

ordinary skill in the art at the time the invention was made to modify the teachings of Apte with

operative to generate a second database programming language. Such modification would allow

the teachings of Apte to improve the accuracy of the database access bridge system and process.

Claim Rejections - 35 USC § 112

4.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making
> and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it
> pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode
> contemplated by the inventor of carrying out his invention.

Claims 1, 5, 8, 10, 16, 18 and 36 are rejected under 35 U.S.C. 112, first paragraph

because: SQL is not properly defined in the specification (i.e SQL is defined as both Structure

Query Language and Structure Query Logic).

Claim Rejections - 35 U.S.C. § 103

5.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
>
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
>
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
>
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
>
> manner in which the invention was made.

Claims 1, 2, 4-6, 8, 18-28 and 32-40 are rejected under 35 U.S.C. 103(a) as being

unpatentable over U.S. Patent No. 6,269,373 issued to Apte et al. ("hereinafter Apte").

As per claims 1 and 19, Apte discloses "a computer readable medium, operative to serve

as a database interface, having instructions which when executed by a computer system", (see

col. 6, lines 35-51), comprise the following steps;

"receiving a Structure Query Logic (SQL) call at a computer system" as the client object

may initiate calls to server object to access database based on various business rules or business

logic implemented within the server object, database may be located within the server or be a

remote database, (see col. 6, lines 31-35), and see column 6, lines 49-51. Apte does not

explicitly disclose mapping the SQL call to a general computer language programming call of a

computer application; and executing the general computer language programming call to invoke

functions of the computer application that correspond to functions specified by the SQL call.

However, on the other hand, Apte discloses a technique of mapping references to a common

object request broker architecture server containing an Enterprise JavaBean to back-end data

store using primitive data types, (see cols. 16-17, lines 66-10); and client object 400 may initiate

calls to server object 402 to access database 404 based on various business rules or business

logic implemented within server object 402 database 404 may be located within the server or be

a remote database, server object 402 may also provide access to current enterprise applications

410 and access to legacy applications 408, (see col. 6, lines 31-37). Further, in column 8, lines

11-16, Apte discloses client can transparently invoke a method on a server object which can be

on the same machine or across a network, the object request broker intercepts the call and is

responsible for finding an object that can implement the request pass it the parameters, invoke its

method and return the results. It would have been obvious to a person of ordinary skill in the art

at the time the invention was made to modify the teachings of Apte with mapping the database

call to a general computer language programming call of a computer application; and executing

the general computer language programming call to invoke functions of the computer application

that correspond to functions specified by the database call. Such modification would allow the

teaching of Apte to improve the accuracy of the database access bridge system and process, and

to provide a method for persisting a container managed server object or bean in a distributed data

processing system, (see col. 2, lines 45-47).

As per claim 2, Apte discloses "the medium wherein said general computer language

programming call is an Enterprise Java Bean (EJB) call", (see col. 7, lines 18-27).

As per claims 4 and 33, Apte discloses "wherein the computer system is an application

server" as an enterprise JavaBean running in a Corba server, (see col. 12, lines 40-42).

As per claims 5 and 20, Apte discloses, "wherein the application server receives the SQL

call from a client computer system" as the client object may initiate calls to server object to

access database based on various business rules or business logic implemented within the server

object, database may be located within the server or be a remote database, (see col. 6, lines 31-

35), and see column 6, lines 49-51.

As per claim 6, Apte discloses "the medium further comprising generating a database call

to a database in response to executing the general computer language programming call" as the

client object may initiate calls to server object to access database based on various business rules

or business logic implemented within server object, (see col. 6, lines 32-36).

As per claim 8, Apte discloses "the medium further comprises validating data operation

prior to issuing a SQL call to a database", (see col. 6, lines 49-51).

As per claim 18, Apte discloses "the medium wherein the database call received at the

computer system is a first SQL database call and a column layout specified in the first SQL

database call is different than a second SQL database call generated to a SQL database in

response to executing the general computer language programming call" as two Java beans may

be employed that implement the client object 400 and server object 402 what makes a bean

different from a pure object is that it has an external interface called the properties interface,

which allows a tool to read what the component is supposed to do and hook it up to other beans

and plug it into another environment, two different types of beans may be used-JavaBeans and

Enterprise JavaBeans (EJB), JavaBeans are intended to be local to a single process and are often

visible at runtime, (see col. 7, lines 18-24).

As per claim 21, Apte discloses "the medium wherein said computer application is in a

different computer programming language than said general computer programming language",

(see col. 7, lines 20-24).

As per claims 22 and 40, the limitations of claims 22 and 40 are rejected in the analysis

of claim 1, and these claims are rejected on that basis.

As per claims 23, 27 and 36, Apte discloses "wherein said database protocol command is

an SQL call", (see col. 6, lines 46-57).

As per claims 24, 25 and 28, Apte discloses "wherein said general computer

programming language is the Java programming language" as the Java programming system

which is an object-oriented programming system, object-oriented programming techniques

involve the definition creation use and instruction of objects, (see col. 6, lines 1-3).

As per claim 26, in addition to the discussion in claim 1, Apte further discloses "exposing

software components, in a first computer programming language, of an application server as

database elements, said software components being operative for accessing said database" as

client object resides on the client side of the distributed application while server object forms the

server side of the distributed application, (see col. 6, lines 25-28), and see 5, lines 24-64;

"accessing said database using said selected one of said software components" as server

object may also provide access to current enterprise applications 410 and access to legacy

applications 408, (see col. 6, lines 36-37). Further, in column 6, lines 46-51, Apte teaches Server

object contains the actual business logic that is implemented using application programming

interfaces that utilize the Java-defined Java database connectivity structured query language

database access interface which provides uniform access to a wide range of relational databases;

As per claim 32, in addition to the discussion in claim 1, Apte does not explicitly disclose

said system operative to execute said general computer programming language call and operative

to generate a second database programming language. However, Apte discloses a server object

contains the actual business logic that is implemented using application programming interfaces that utilize the java defined java database connectivity structured query language database access interface which provides uniform access to a wide range of relational databases, these databases may be found in database, server object contains methods used to provide needed functions invoked from client object, (see col. 6, lines 46-53). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the teachings of Apte with operative to generate a second database programming language. Such modification would allow the teachings of Apte to improve the accuracy of the database access bridge system and process, and to provide a method, data processing system and instructions for persisting the state information of objects within a distributed application, (see col. 5, lines 62-64).

As per claim 34, the limitations of claim 34 are rejected in the analysis of claim 1, and this claim is rejected on that basis.

As per claim 35, the limitations of claim 35 are rejected in the analysis of claim 26, and this claims is rejected on that basis.

As per claim 37, the limitations of claims 37 are rejected in the analysis of claim 18, and this claim is rejected on that basis.

As per claim 38, Apte discloses "the medium wherein the computer programming language is object oriented and wherein said components are objects (thus, two Java beans may be employed that implement to client object 400 and server object 402", (see col. 7, lines 18-20).

As per claim 39, Apte discloses "wherein said general computer programming language is the Java programming language" as the Java programming system which is an object-oriented

programming system, object-oriented programming techniques involve the definition creation

use and instruction of objects, (see col. 6, lines 1-3).

Claim Objections

6.   Claims 9-17 and 29-31 are objected to as being dependent upon a rejected base claim, but

would be allowable if rewritten in independent form including all of the limitations of the base

claim and any intervening claims.

The prior art of record does not teach or suggest in combination with other elements,

Wherein the general computer programming language has components that generate

database calls to a database in response to executing the general computer language

programming calls; and further comprising:

analyzing the components to determine the correspondence between the database

elements and the elements of the components that access the database elements; and

creating a database bridge map that identifies the correspondence as recited in claim 9.

Claims 10-17 further limit the subject matter of claim 9.

The prior art of record does not teach or suggest in combination with other elements,

Wherein the first general computer programming language has components that generate

database calls to a database in response to executing said selected one; and further comprising:

analyzing the components to determine the correspondence between the database

elements and the elements of the components that access the database elements; and

creating a database bridge map that identifies the correspondence as recited in claim 29.

Claims 30 and 31 further limit the subject matter of claim 29.

Prior Art

7.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure: Maritzen et al. U.S. Patent No. 5,899,990 relates to a system and operating method

for connecting an application. White et al., Enterprise Java Platform Data access.

Contact Information

8.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Jean B Fleurantin whose telephone number is 703-308-6718.

The examiner can normally be reached on 7:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, BREENE JOHN E can be reached on 703-305-9790. The fax phone number for the

organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding

should be directed to the receptionist whose telephone number is 703-305-3900.

Jean Bolte Fleurantin

12 March 2004

SHAHID ALAM
PRIMARY EXAMINER